

Amendment to the Claims:

Claim 1 (currently amended): A *Flavobacterium heparinum* host cell transformed with a recombinant DNA ~~construction~~ expression vector effective to cause expression of a at least one protein encoded by a homologous or heterologous coding sequence selected from the group consisting of heparinase I, heparinase II, heparinase III, and selective markers, placed under the control of regulatory regions effective in *Flavobacterium heparinum*.

Claims 2-4 (canceled)

Claim 5 (original): The host cell of claim 1 wherein said recombinant DNA is integrated into the *Flavobacterium heparinum* chromosome.

Claim 6 (original): The host cell of claim 5 wherein said recombinant DNA is integrated through homologous recombination.

Claim 7 (previously presented): The host cell of claim 6 wherein said integrated DNA comprises a gene which is expressed at high levels.

Claim 8 (original): The host cell of claim 5 wherein said recombinant DNA is integrated through any of bacteriophage integration, transposition of a transposon and transposition of an insertion sequence element.

Claim 9 (original): The host cell of claim 1 further comprising a selective marker for selection of host cells expressing a desired recombinant DNA.

Claim 10 (original): The host cell of claim 9 wherein said selective marker comprises one or more of a gene encoding antibiotic resistance, heavy metal resistance, a physiological growth inhibitory factor, and an amino acid requirement factor.

Claim 11 (original): The host cell of claim 10 wherein said selective marker expression is regulated by a regulatory region from *Flavobacterium heparinum*.

Claim 12 (previously presented): The host cell of claim 11 wherein said regulatory region is the *hepA* or *lysA* promoter.

Claim 13 (original): The host cell of claim 1 wherein said recombinant DNA is regulated by a regulatory region from *Flavobacterium heparinum*.

Claim 14 (previously presented): The host cell of claim 13 wherein said regulatory region is the *hepA* or *lysA* promoter.

Claim 15 (original): The host cell of claim 1 wherein said recombinant DNA is introduced into said cell by conjugation.

Claim 16 (original): The host cell of claim 1 wherein said recombinant DNA is introduced into said cell by electroporation.

Claim 17 (original): The host cell of claim 1 wherein said recombinant DNA is introduced into said cell by bacterial phage transfection.

Claim 18 (original): The host cell of claim 1 wherein said cell glycosylates glycoproteins encoded by said recombinant DNA.

Claim 19 (original): The host cell of claim 1 wherein said cell expresses recombinant DNA containing a homologous gene.

Claim 20 (original): The host cell of claim 1 wherein said cell expresses recombinant DNA containing a heterologous gene.

Claim 21 (currently amended): A *Flavobacterium heparinum* host organism transformed with recombinant DNA comprising a homologous or a heterologous gene encoding at least one

protein selected from the group consisting of heparinase I, heparinase II, heparinase III, and selective markers, placed under the control of a gene promoter derived from a protein endogenous to the *F. heparinum* host and operably linked to the coding sequence for the homologous or heterologous gene, wherein said recombinant DNA is introduced in the form of an expression vector.

Claim 22 (previously presented): The *F. heparinum* host organism of claim 21, wherein said gene promoter is the *hepA* promoter.

Claims 23-25 (withdrawn)

Claim 26 (currently amended): An expression system for expressing a desired polypeptide or protein comprising:

- (1) a *F. heparinum* host organism
- (2) nucleotide sequences encoding a at least one desired polypeptide or protein selected from the group consisting of heparinase I, heparinase II, heparinase III, and selective markers, and
- (3) a an expression vector for expressing the nucleotide sequences capable of expressing the desired polypeptide or protein.

Claims 27-29 (withdrawn)

Claim 30 (previously presented): The host cell of claim 1 comprising a vector comprising (a) a functional origin of replication (*OriC*) region; (b) replication (*rep*) genes; and (c) a gene promoter derived from a protein endogenous to the *F. heparinum* host.

Claim 31 (previously presented): The host cell of claim 1 comprising a vector comprising a gene promoter derived from a protein endogenous to the *F. heparinum* host.

Claim 32 (currently amended): The host cell of claim 31, wherein said vector further comprises a nucleotide sequence encoding a selectable selective marker.

Claim 33 (currently amended): The host cell of claim 32, wherein said selectable selective marker encodes for antibiotic resistance.

Claim 34 (previously presented): The host cell of claim 33, wherein the host cell is resistant to an antibiotic selected from the group consisting of ampicillin, tetracycline, erythromycin, trimethoprim, and chloramphenicol.

Claim 35 (canceled)